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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,879	01/09/2006	Masayoshi Kobayashi	Q92553	7294

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
ANWAR, MOHAMMAD S	
ART UNIT	**PAPER NUMBER**
2463	

NOTIFICATION DATE	DELIVERY MODE
02/19/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com
PPROCESSING@SUGHRUE.COM
USPTO@SUGHRUE.COM

Office Action Summary	Application No.	Applicant(s)	
	10/563,879	KOBAYASHI, MASAYOSHI	
	Examiner	Art Unit	
	MOHAMMAD ANWAR	2463	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Finality

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

1. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection. Please see response below:

In response to applicant arguments, **Applicant respectfully submits that claims 1, 8, 15, and 33 would not have been anticipated by** Jinzaki. Claim 1 recites, *inter alia,* "terminating... a first transport layer connection.., at a first transmission rate.., and a second transport layer connection.., at a second transmission rate." However, Jinzaki neither teaches nor suggests this claimed feature because Jinzaki does not disclose terminating *plural* transport layer connections at various transmission rates. Instead, Jinzaki merely discloses that a relay device (250) on a transmitting side transmits packets to a relay device (260) on a receiving side at a transmission rate, which is based on packet reception at the receiving side relay device (260). *See* Jinzaki, col. 35, 11. 1-7. There is no teaching that a relay device in Jinzaki terminates plural transport layer connections at various transmission rates.

In response to applicant arguments, Still further, claim 1 recites, *inter alia,* "determining a total transmission rate of said first and second relay connections based on the first and second transmission rates." However, Jinzaki neither teaches nor

suggests the claimed "determining." This is because Jinzaki does not disclose calculating a total transmission rate of second connections based on transmission rates of terminated first connections. At best, Jinzaki only discloses transmitting data between relay devices at a transmission rate based packet reception at the receiving side. *See* Jinzaki, col. 35, 11. 1-7. There is absolutely no teaching or suggestion that a "total transmission rate" for plural connections is calculated. Further, there is no teaching or suggestion that the transmission rate in Jinzaki is calculated based on transmission rates for other connections. To the extent the Examiner's position (see Office Action, p. 2) is based on the assertion that "Jinzaki et al. reference mentions calculating transmission rate in column 28 lines 38-43," Applicant respectfully submits that Jinzaki simply sets a transmission rate for a single outgoing to connection to a single device based on "mode information" (see Jinzaki, col. 28, 1.40), which includes symbols for indicating a transmission mode (see Jinzaki, col. 27, 11.57-59). However, the mode information in Jinzaki does not include a transmission rate for other connections. Therefore, Jinzaki fails to teach or suggest the claimed "determining." As a result, Jinzaki fails to teach or suggest all the features of claim 1, and hence claim 1 and its dependent claims would not have been anticipated by Jinzaki for at least these reasons. To the extent independent claims 8, 15, and 33 recite features similar to those discussed above regarding claim 1 and are rejected by the Examiner upon substantially the same rationale, claims 8, 15, 33, and their dependent claims would not have been anticipated by Jinzaki for at least reasons analogous to those discussed above regarding claim 1 (please see newly cited references Horiguchi et al. and Uriu et al.).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3, 6-10, 13-17, 19-24 and 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable by Horiguchi et al. (U.S. PGPub. No. 2002/0071387) in view of Uriu et al. (U.S. Patent No. 6,430,157 B1).

For claims 1 and 15, Horiguchi et al. disclose terminating, at the transport layer relay device, first transport layer connection between a first source terminal and a first destination terminal at a first transmission rate in the transport layer and a second transport layer connection between a second source terminal and a second destination terminal at a second transmission rate in the transport layer (see Figure 1, port 1 and port 2), relaying data flow said first transport layer connection to said first destination

terminal as a first relay connection and data flow of said second transport layer connection to said second destination terminal as a second relay connection to respectively separate said first and second transport layer connections (see Figure 1, port 1 and port 2), determining a wherein the total transmission rate of said first and second relay connections based on the first and second transmission (see para. 47, Bandwidth and rate calculation for each relay tunnel), allocating the total transmission rate among each of first and second relay connections (see para. 47, bandwidth and rate controller), wherein the first source terminal, the second source terminal, the first destination terminal and the second destination terminal are different from each other (see Figure 1, port 1 and port 2). Horiguchi et al. disclose all the subject matter but fails to mention calculating transmission rate. However, Uriu et al. from a similar field of endeavor disclose calculating transmission rate (see column 2 lines 8-19). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Uriu et al. transmission rate calculation method into Horiguchi et al. relay transmission scheme. The method can be implemented in a relay devices. The motivation of doing this is to control congestion (see column 2 lines 34-36).

For claims 2, 3, 9, 10, 16 and 17, Horiguchi et al. disclose wherein said total transmission rate is determined in accordance with the number of transport layer connections that are being relayed (see para. 47); congestion conditions of a network through which the relay connections pass (see column 2 lines 34-36, congestion judgement and rate controller). Horiguchi et al. disclose all the subject matter but fails to mention clearly transmission calculation method. However, Uriu et al. from a similar field

of endeavor disclose transmission calculation method (see column 2 lines 8-19). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Uriu et al. transmission rate calculation method into Horiguchi et al. relay transmission scheme. The method can be implemented in a relay devices. The motivation of doing this is to control congestion (see column 2 lines 34-36).

For claims 6, 7, 13, 14, 20 and 21, Horiguchi et al. disclose all the subject matter but fails to mention further comprising estimating, by means of measurement packets; congestion conditions of a network through which the first and second relay connections pass, wherein said congestion conditions are also used to determine said total transmission rate. However, Uriu et al. from a similar field of endeavor disclose estimating, by means of measurement packets; congestion conditions of a network through which the first and second relay connections pass, wherein said congestion conditions are also used to determine said total transmission rate (see column 2 lines 34-36). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Uriu et al. transmission rate calculation method into Horiguchi et al. relay transmission scheme. The method can be implemented in a relay devices. The motivation of doing this is to control congestion (see column 2 lines 34-36).

For claims 8 and 33, Horiguchi et al. disclose first terminal-side connection termination unit that terminates first transport layer connection between a first source terminal and a first destination terminal in a transport layer (see Figure 1, port 1), a second terminal-side connection termination unit that terminates a second transport

layer connection between a second source terminal and a second destination terminal in a transport layer (see Figure 1, port 2) and a first interdevice connection termination unit that terminates first transport layer connections with a first transport layer relay devices that relays transport layer data between said first terminal-side connection termination units and said first interdevice connection termination units (see Figure 1, VPN1 is terminated separate); a second interdevice connection termination unit that terminates a second transport layer connection between a second transport layer device that relays transport layer data between said second terminal-side connection termination unit and said second interdevice termination unit (see Figure 1, VPN 2 is terminated separate), transmission rate control unit that controls transmission rates of first and second interdevice connection termination units, wherein the transmission rate control units determines a total transmission rate of all interdevice connection termination units allocates said total transmission rate among said first and second interdevice connection termination units, and reports transmission rate that have been allotted to said first and second interdevice connection termination units, said first interdevice connection termination unit relaying said first transport layer connection to said first destination terminal as a first relay connection based on said allocated total transmission rate; and said second interdevice connection termination unit relaying said second transport layer connection to said second destination terminal as a second relay connection based on said allocated total transmission rate, and wherein the first source terminal, the second source terminal, the first destination terminal and the second destination terminal are different from each other (see para. 47, bandwidth control

portion for VPN connection of various links). Horiguchi et al. disclose all the subject matter but fails to mention calculating transmission rate. However, Uriu et al. from a similar field of endeavor disclose calculating transmission rate (see column 2 lines 8-19). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Uriu et al. transmission rate calculation method into Horiguchi et al. relay transmission scheme. The method can be implemented in a relay devices. The motivation of doing this is to control congestion (see column 2 lines 34-36).

For claims 22 and 34, Horiguchi et al. disclose a plurality of terminal-side connection termination units that terminate transport layer connections between a plurality of source terminals and destination terminals in the transport layer (see Figure 1, port 1 and port 2); an interdevice connection termination unit that terminates a plurality of transport layer connections with a plurality of transport layer relay devices that relay transport layer data between said plurality of terminal-side connection termination units and said interdevice connection termination unit (see Figure 13); a transmission rate control unit that determines a total transmission rate of the plurality of relay connections based on the total transmission rate (see para. 47, bandwidth control); wherein said interdevice connection termination unit transmits said plurality of relay connections to said plurality of destination terminals in accordance with the total transmission rate (see Figure 13); wherein the transmission rate control unit determines the total transmission rate of said interdevice connection termination unit and reports the allocation of rates among the plurality of relay connections to said mux-demux unit

(see para. 47), MUX –DEMUX (see Figure 13, FWD). Horiguchi et al. disclose all the subject matter but fails to mention calculating transmission rate. However, Uriu et al. from a similar field of endeavor disclose calculating transmission rate (see column 2 lines 8-19). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Uriu et al. transmission rate calculation method into Horiguchi et al. relay transmission scheme. The method can be implemented in a relay devices. The motivation of doing this is to control congestion (see column 2 lines 34-36).

For claims 23, 24, 27 and 28, Horiguchi et al. disclose all the subject matter but fails to mention wherein said total transmission rate is determined in accordance with the number of transport layer connections that are being relayed and congestion information of connections that are reported from the interdevice connection termination unit. However, Uriu et al. from a similar field of endeavor disclose wherein said total transmission rate is determined in accordance with the number of transport layer connections that are being relayed and congestion information of connections that are reported from the interdevice connection termination unit (see column 2 lines 34-36). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Uriu et al. transmission rate calculation method into Horiguchi et al. relay transmission scheme. The method can be implemented in a relay devices. The motivation of doing this is to control congestion (see column 2 lines 34-36).

For claim 26, Horiguchi et al. an application information analysis unit for analyzing application information in transport layer data when transport layer data are

transferred between each of said terminal-side connection termination links and said MUX-DEMUX unit discloses MUX-DEMUX unit (see para. 47); wherein said transmission rate control unit allocates said total transmission rate among the transmission rates of each of the plurality of relay connections and reports the allocated transmission rates to said MUX -DEMUX unit based on the application information analyzed by said application information analysis unit (see Figure 13, FWD+MUX-DEMUX).

For claim 29, Horiguchi et al. disclose wherein, when establishing a new transport layer connection between a new source terminal and a new destination terminal, said total transmission rate is determined (see para.47, bandwidth control), said total transmission rate is allocated to each relay connection (see para.47) and the allotted transmission rates are reported to a partner transport layer device in establishing said new transport layer connection (see para. 77).

For claim 32, Horiguchi et al. disclose wherein, when establishing a transport layer connection between a new source terminal and a new destination terminal, an initial transmission rate (see column 34 lines 13-17) that is reported from said transmission rate control unit is reported to the new destination terminal (see column 34 lines 17-18).

For claim 30, Horiguchi et al. disclose wherein when establishing a transport layer connection between a new source terminal and a new destination terminal, an initial transmission rate is reported to the destination from said transmission rate control unit (see para 46).

For claim 31, Horiguchi et al. disclose wherein when establishing new transport layer connection between a new source terminal and a new destination terminal, said total transmission rate is allocated and the allocated transmission rate are reported to a partner transport layer device in establishing a new transport layer protocol (see para. 49, priority queues are determined for each link and transmission rate is controlled).

4. Claims 5, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiguchi et al. in view of Uriu et al. as applied to claims 1, 8 and 15 above, and further in view of Yao et al. (U.S. Patent No. 6,097,697).

For claims 5, 12 and 19, Horiguchi et al. and Uriu et al. disclose wherein said total transmission rate is allocated transmission rates of each of said first and second relay connections depending on application information in said data flow of each of said first and second relay connections (see column Figure 1, port 1 and port 2). Horiguchi et al. disclose all the subject matter but fails to mention depending on application information. However, Yao et al from a similar field of endeavor disclose depending on application information (see column 4 lines 9-10). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Yao et al. congestion scheme into Horiguchi et al. and Uriu et al. transport layer relay transmission scheme. The method can be implemented in the transmission relay unit. The motivation of doing this is to control congestion within a network (see column 2 lines 61-62).

5. Claims 4, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiguchi et al. in view of Uriu et al. as applied to claims 1, 8 and 15 above, and further in view of Rochberger et al. (U.S. Patent No. 6,097,697).

For claims 4, 11 and 18, Horiguchi et al. disclose wherein said total transmission rate is determined in accordance with the number of transport layer connections that are being relayed (see para. 47),and congestion conditions of a network through which the relay connections pass (see para. 51). Horiguchi et al. and Uriu et al. disclose all the subject matter but fails to mention such that effective transmission rates are attained for relay connections, wherein transmission rates for traffic other than relay connections that shares bottleneck with the relay connections are allocated differently than transmission rates allocated to the relay connections. However, Rochberger et al. from a similar field of endeavor disclose such that effective transmission rates are attained for relay connections, wherein transmission rates for traffic other than relay connections that shares bottleneck with the relay connections are allocated differently than transmission rates allocated to the relay connections (see column 10 lines 19-26). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Rochberger et al. priority scheme into Horiguchi et al. and Uriu et al. congestion control scheme. The method can be implemented by dynamically assigning priority to individual packets within a data stream. The motivation of doing this is to dynamically prioritizing packets in a network entity according to their sensitivity to time delays (see column 7 lines 40-43).

6. Claims 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiguchi et al. in view of Uriu et al. as applied to claim 22 above, and further in view of Rochberger et al. (U.S. Patent No. 6,760,309).

For claim 25, Horiguchi et al. disclose wherein said transmission rate control unit determines a total transmission rate in accordance with the number of transport layer connections that are being relayed and the congestion information of connections that from each interdevice connection termination unit (see column 69 lines 45-65). Horiguchi et al. and Uriu et al. disclose all the subject matter but fails to mention such that effective rates for each of the plurality of relay connections are attained and wherein transmission rates for traffic other than relay connections that share bottlenecks with the plurality of relay connections are allocated differently than transmission rates allocated to the relay connections. However, Rochberger et al. from a similar field of endeavor disclose such that effective rates for each of the plurality of relay connections are attained and wherein transmission rates for traffic other than relay connections that share bottlenecks with the plurality of relay connections are allocated differently than transmission rates allocated to the relay connections (see column 10 lines 19-26). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Rochberger et al. priority scheme into Horiguchi et al. and Uriu et al. congestion control scheme. The method can be implemented by dynamically assigning priority to individual packets within a data stream. The motivation of doing this is to dynamically prioritizing packets in a network entity according to their sensitivity to time delays (see column 7 lines 40-43).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
Examiner
Art Unit 2463

/M. A./
Examiner, Art Unit 2463

/Derrick W Ferris/
Supervisory Patent Examiner, Art Unit 2463